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ABSTRACT

Systemic change in education refers to many facets of a community working together to support and improve how well children learn. This study examines the perceptions of teachers involved in systemic change as math and science resource teachers. In Duval County, Florida, a group of teachers were hired to assist systemic change as part of a 5-year National Science Foundation grant. This study is the first year of the grant from the teachers' perspectives. The study answers the question, "What influences the satisfaction of teachers who are chosen to be leaders of change?" by looking at the changes in individual group members. The results make a connection between tasks and activities team members are asked to do and members' satisfaction levels. Members of this group shared an anthology of their choice throughout the year to express their perceptions of working on the team. The theory of group dynamics was used to identify the stages of development as well as the levels of satisfaction team members experienced. From this study, six recommendations for supervisors of teachers as leaders are provided. (Contains 25 references.) (Author/SM)

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Teachers as leaders of systemic change: How to use them most effectively

ED 440 956

Abstract

Systemic change in education refers to many facets of a community working together to support and improve how well children learn. This study examines the perceptions of teachers involved in systemic change as math and science resource teachers. In Duval County, Florida, a group of teachers were hired to assist systemic change as part of a five-year National Science Foundation grant. This study is the first year of the grant from the teachers' perspectives. This study answers the question, what influences the satisfaction of teachers who are chosen to be leaders of change by looking at the changes in individual group members.

The results make a connection between tasks and activities team members are asked to do and members' satisfaction levels. Members of this group shared an analogy of their choice throughout the year to express their perceptions of working on this team. The theory of group dynamics was used to identify the stages of development as well as the levels of satisfaction team members experienced. From this study, six recommendations for supervisors of teachers as leaders are provided.

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Introduction

I participated with a group of exemplary teachers as part of a National Science Foundation grant to work with urban school teachers in Jacksonville, Florida. We worked with teachers in schools whose children had scored very low on the CTBS (Comprehensive Test of Basic Skills) as well as on the state's FCAT (Florida Comprehensive Assessment Test). Our charge was to "provide professional development support services to teachers of science, mathematics, and technology" (USI mission, 1998). We were selected on the basis of a written application and a 45-minute interview by a team of ten district level members. Once we were chosen, we participated in extensive workshops and worked together to plan and organize a comprehensive science and math programs for the middle school teachers in the district.

I was able to document each team member's view of their perceptions monthly. The experiences were very "telling" of our perceptions of working together as a team of leaders designed to affect systemic change in this large school district, Duval County. Because of this I have chosen to refer to the team members as "teachers as leaders."

Prior to assessing the value of this program, I looked at the stages of development of groups over time based on small group research (George, 1982; Napier & Gershenfeld, 1987; Tuckman, 1965). My thought is that teachers as leaders will most likely go through the same stages of development as identified in small group research (Hall, Wallace & Dossett, 1973). During the year, I was looking for clues of what makes this group of teachers move through these stages. By interviewing each member of the team, I was able to identify what stage of development they experienced on a

monthly basis based on Tuckman's (1965) descriptors of group stages of development. I also included George's (1982) descriptors of middle school team development, which complements Tuckman's indicators to verify the stages of development. My intent was to support current research on group dynamics and offer school district supervisors another way of supporting their best teachers.

Problem

Groups go through various stages of development (Bell,1990; George, 1982; Plodzik, 1986; Tuckman, 1965). The problem of this study is twofold: can we use stories to identify individual development within a group? And can we identify specific events that influence members' satisfaction?

Questions

Will our USI group pass through the identified stages of development?
Will the individual USI team members pass through the stages at the same time?
What experiences appear to influence the various stages individual members experience?

Review of literature

To conduct this study, I looked at the theory of group dynamics to describe the stages of development. I used this information to compare different interests and strengths of individuals with their stated satisfaction levels. By determining the

influence of individual strengths, leaders of organizations and/or teams will be able to create tasks that yield the most productivity and satisfaction of group members.

Group Dynamics

The stages of group and team development have been described consistently in group dynamics and education (George, 1982; Hall, Wallace, & Dossett, 1973; Plodzik, 1986; Rutherford, 1981; Tuckman, 1965). The stages of team development appear to be influenced by leadership, interpersonal skills, and structure (Bell, 1990; Fleming & Fleming, 1982; George, 1982; LaCoursiere, 1974; Plodzik, 1986; Tuckman & Jensen, 1975). Some researchers believe it takes a long time to train members to accept a team role. Hall et al. (1973), for instance, suggest that any innovation takes three years to implement successfully. Although there is disagreement as to the amount of time it takes for a group to develop, researchers agree that groups of people progress through specific stages of development.

Tuckman (1965) analyzed 60 studies and suggested four stages of group development. The first stage is "forming," in which groups focus on the task to complete. Emotional responses as well as status differentiating characterize the second "storming" stage. The third stage, "norming," is characterized by group cohesion. The final stage is called "performing." Groups are able to perform tasks effectively and group members have functional roles. The final stage is marked by positive interrelations of members. Tuckman and Jensen (1975) added "adjourning" to Tuckman's phases which indicates the time when a group finishes its tasks and moves on.

Hall, Loucks, Rutherford, and Newlove (1975) identify levels that individuals experience during the implementation of any innovation. It appears that individuals experience different Levels of Use (LoU), depending on the amount of orientation and preparation received prior to implementing an innovation. While initial attempts at innovations are mechanical and perhaps frustrating at times, a teacher's commitment to refining and evaluating (higher levels of use) allows for a successful implementation of an innovation.

George (1982) contends that for teams of teachers to work together, a school principal must understand that teams develop through phases. His phases mirror the individual Levels of Use that Hall and his colleagues describe. George's phases include organizing, developing a sense of community, team teaching, and using a governmental process. In the initial phase of the interdisciplinary team organization, teachers join together focusing on the same philosophy and goals. Structural decision-making occupies much of the planning time, and teachers meet together to discuss students' needs. Team meetings are usually very formal and structured. This phase is similar to LoU one and two, where teachers are oriented and prepared to attempt an innovation.

As teachers begin to learn more about one another and have the opportunity to share ideas, they grow closer together and begin to experience a sense of unity, the second phase of the interdisciplinary team organization. Faculty morale usually increases during this phase of development, and some teachers begin planning activities together. In phase two, team members communicate more openly and begin to work together more. During this phase, teachers' LoU is mechanical or routine. Teams of teachers appear to learn about one another as they work together.

Team teaching is the third phase of the interdisciplinary team organization. Teachers work together to present two to three interdisciplinary units during a year. This phase takes extra planning time and only exists when teachers have the ability and desire to work together. The teachers' major complaint during the initial implementation of an interdisciplinary team organization appears to be a lack of planning time (Day, 1985; Vars, 1987). Teachers' LoU at this phase focuses on refinement and integration. The students become the focus rather than the mechanical procedures for running a team (Collen, 1982).

The final phase of the interdisciplinary team organization is governmental. Teachers on the interdisciplinary team accept the responsibility of organizing and running the team. This phase is based on power sharing and group policymaking. The Team Leader Council (TLC) is most effective and efficient during this phase. A Team Leader Council is a group of teachers and support personnel who meet weekly to communicate and share ideas. After TLC meetings, members of the TLC return to their respective teams and share information with team members. In this fourth phase of development, teachers are familiar with one another, what and how they teach, and their strengths and their weaknesses. Furthermore, teachers work together to evaluate the organization. Hall et al. (1973) indicate that many teams do not reach this level of sophistication.

George (1982) found that teams need to be carefully nurtured "with an emphasis on the first and fourth phases in the early part of the new [organization's] life" (p. 13). Preparing and evaluating the team members continually will provide an organization the opportunity to become successful. He believes that teams of teachers should be

encouraged to seek the next phase as they achieve success at a lower stage of development. Rickell (1961) agrees that involving participants as fully as possible in all phases of change is essential for growth.

Plodzik (1988) used George's (1982) phases of team development to evaluate the level of teams in New England. Plodzik (1986) presented evidence that a checklist can identify levels of teams. He suggests that middle school team members who work together for one or 10 years can exhibit the same level of team development, suggesting that development is not necessarily a natural process for all teams. Furthermore, the principals of those teams studied suggest that the personalities of teachers have the most influence on team development. Personality traits that appear to be advantageous to teams include "strength in subject matter, flexibility, a desire to be a team member, and understanding the needs of preadolescent learners" (p. 122). Teacher interaction and inservice education courses on middle level education also appear to influence team development.

Brilhart (1986) suggests the interconnection of leadership, interpersonal skills, and structure influences the effectiveness of groups. He discussed his observation of an ideal group that worked together to establish a constitution and by-laws for a school. The characteristics of that group include a commitment by all members to the cause, a strong, supportive, organized leader, and a group of people able to communicate well. Members have agendas prior to meetings, work in a comfortable room, and all decisions are made by consensus in effective groups.

Bell (1990) observed and interviewed members of teams in five middle schools for seven weeks to determine what makes some teams function better than others. She

describes the characteristics of more and less productive teams. More productive teams are characterized as having goals, activities and problem solving strategies for their students. The combination of leadership, interpersonal skills, and structure appear to influence the effectivenenss of team organizations. Qualities of team leaders of effective teams include: knowledge, enthusiasm and organization. Interpersonal skills of team members include commitment, the ability to communicate, a cooperative spirit, a willingness to conform to group ideas and the reality that conflicts will exist. Structure of team meetings include: agendas, a group setting and a decision making process on more productive teams. All teams of teachers in her study appeared to move at some rate toward becoming well functioning. The movement was enhanced by the commitment of the members, the amount of decision-making abilities of team members and the cooperative effort of individuals on the teams. In all of the more productive teams, there were at least two members who were committed to making a difference as a team member (Bell, 1990).

More effective teams appear to possess the ability to evaluate their own programs in an open realistic manner by proceeding with options developed by the team of teachers (Fleming & Fleming, 1982). Teams that practice evaluation procedures are at a very high level of development according to Hall et al. (1973). Regular evaluations are necessary to ensure growth and enhance the team process (Brickell, 1961; David et al., 1987; Lobb, 1964; Merenbloom, 1986). Self-assessment enables teachers to become aware of their effectiveness and encourages them to become self-directing (Lobb, 1964; Reinhartz & Beach, 1984).

There is evidence that teachers with a knowledge of concepts, leaders who are managers and spirit boosters, and teams of teachers whose classrooms are close to one another lead to well-functioning teams (Alexander & George, 1981; Bredo, 1975; Lounsbury, 1984; Merenbloom, 1975; Vars, 1987; Weller et al., 1987). When teachers are engaged in decision-making, problem solving, and collaborative efforts, team effectiveness increases (Bell, 1990; Bredo, 1975; Conger, 1980; Schwartz et al., 1987; Stimson & Applebaum, 1988). This study seeks to determine what stimulates productivity of teachers as leaders. It is hoped that this study will contribute to the knowledge about how to best use teachers as leaders to affect systemic change.

There is substantial evidence to support the characteristics of more effective teams and the evolution of teams. This study examines individual teacher's perceptions to determine whether there are differences among teachers as to what makes them more satisfied.

Methodology

I used a qualitative case study to identify perceptions of team members in the first year of an NSF grant. Kirk and Miller (1986) define qualitative research as involving "sustained interaction with the people being studied in their own language, and on their own turf" (p. 12). A case study is a detailed examination of a particular setting; in this case the 26 Urban Systemic Initiative (USI) team members. Case studies are used to investigate and describe real-life situations. Furthermore, case studies are conducted when a researcher has no control over behavioral events (Bogdan & Biklen,

1982; Yin, 1984). In this study, the teachers involved were selected prior to the study by an interview process. I was one of those teachers selected.

Each month for the first year of the grant, I interviewed every team member and asked him or her to describe their experiences based on an analogy of their choosing. Several members had difficulty understanding my instructions. I prompted them by suggesting that one team member had used the idea of a garden. She described the first month as an open field that had been completely cleared. She looked forward to working in the garden and planting many different types of seeds. All of the members were able to begin with a story.

In order to analyze the data I used a coding system recommended by Bogdan and Biklen (1982). I looked for patterns and themes throughout the responses to interpret the stories. For each member's response, I used Tuckman's stages. I identified each of the responses according to the stages of development (forming, Sstorming, norming, performing and adjourning.)

After identifying the stage of development, I went back to the data to look for patterns and wrote down words to represent the emotional tones of the responses. Because group members were sharing their stories through a theme of their choosing, there existed passion in their descriptions. From the stories I identified key words and coded the team member's monthly responses on a scale of five to one. Five indicates excitement; 4 happy, positive experiences; 3 indicates intense, busy or tired but productive, 2 is stressed out or overwhelmed but still functioning; and 1 is distressed or unproductive.

In February, I showed the members their stories and the codes I used. I asked them to verify the satisfaction levels that I gave them. After February, I had the members preface their stories with their level of satisfaction, on a scale of one to five. After finding the average satisfaction level of each month I began to analyze the data further to see if there were any patterns or differences within the group members. Because the group appeared to be relatively close to one another with regard to the stages, if several group members indicated a very slow start or a very high level of satisfaction, I attempted to analyze the data to determine what may have caused the change. My intent was to suggest causes that may influence the scores of group members.

Once the stages of individual experiences were identified I took the average of the group each month to look at changes over time and shared the data as a line graph of the average of the team members for each month. I had the members chart their individual scores on the group graph I created. The group average had dropped in February and so I asked the members to share with one another what made their satisfaction levels high. I also encouraged "us" to look out for one another and to try to encourage one another. The following is an account of the first year of the implementation of the Urban Systemic Initiative through members' stories.

Results and Data

I interviewed team members and asked them to share analogies relating their perceptions of the USI team experience to their story. Team members' analogies consisted of cooking, sewing, music, eating, furniture upholstery, gardening,

archaeology, art, walking on the beach, movie watching, running, socializing and quotes. Each team member was asked to describe how he or she felt about the program based on her or his analogy. The analogies were coded on a scale of five to one with 5 indicating excitement, 4 indicating good, 3 indicating OK, 2 indicating stressed but moving forward and 1 indicating distress. The average for each month was calculated based on the number of members who responded. The following is a table of the data.

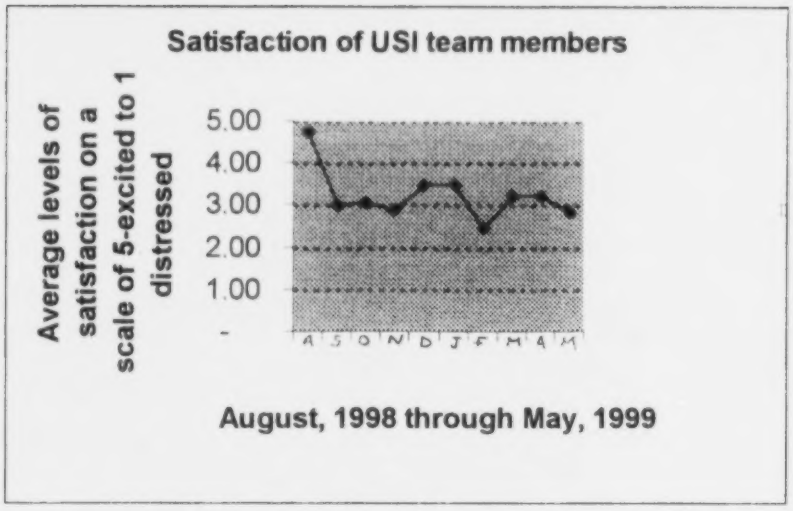

Table 1: Team Member Satisfaction.

N=18 from August through February. N=26 from March through May

Team Member Satisfaction.

Team members involved in the Urban Systemic Initiative, a National Science Foundation grant, provided analogies over the first year of the grant. A number between 5 and 1 was attached to their stories. After scoring each member's analogy, I calculated the average for each month and graphed it. Each space represents a month, starting in August.

August had very high ratings. A rating of five (excited) was characterized by "I'm planning a dinner party;" "I'm in a fabric store;" "I see an empty lot;" "I have a basket of unarranged buds;" "I'm talking with my friends and I'm so excited;" "I got a new pair of shoes!" One of the highlights of interviewing the members of the USI team was to sense their excitement during that first month. Members were anticipating good things. We were involved in a lot of inservice. There was an overwhelming sense of enthusiasm and commitment to changing the system. Teachers spent a great deal of time

getting to know one another and what the task was. These characteristics reflect Tuckman's "forming" stage.

In September, things changed. Listen to some of the comments: "My bread didn't rise." "This month has been heavy metal and the blues." "My buds drooped." "Weeds." "September Morn." "I'm very unsettled." "My plan changed, I had to buy new fabric." along with "We got rolling with the tide." and "A kick off (for a football game)." There was evidence that reality and uncertainty, while it did not dampen our perseverance, it challenged our "spirit." Teachers were experiencing tremendous fluctuation of emotions. From their responses, Tuckman's "storming" stage was evident.

"Storming" continued into October. October was the lowest month for averages and the highest range of emotions. There were some very tense responses: "I changed my plan." "We're ripping fabric." "My garden is on a landfill." "Don't talk to me now" "I'm eating lean and limited." "Don't ask." Other people were "blooming": "Those flowers have perked back up." "An orchestra is playing." "I'm getting my stride now and feeling more confident." "Wonderful, peaceful, excited, VanGogh's 'Yellow House'." "Finding their place" on the team energized those who expressed "renewal" or "gaining confidence" as they worked in the schools they were serving. So, while many responses indicated Tuckman's "storming" stage, there were others who were moving into "norming." However, those who were experiencing "norming" as described by Tuckman were having the experiences in the schools where they were working and not as part of the USI team.

November showed an increase in "norming" for the team. "The biscuits smell good;" "I think it's getting better all the time;" "We are fine-tuning;" "I've laid out some fabric," indicating teachers' positive attitudes. However, there again was a down side to the responses: "Pesticides have killed everything and there has been no rain." "It is very high tide." "Tiring." "Things are not falling into categories." and "Did we have a November?" The elementary team members experienced a shift in focus from the district which caused some stress. They had been working with third grade teachers and in the middle of their efforts were moved to fifth grade classrooms. Some of the stressful comments however were coming from secondary team members whose "school settings" were not developing as they had hoped. Even so, team members were beginning to work together more during this month. The Integrated Science program was being piloted in five of the middle schools by pairs of math and science team members. This month's analogies represented "storming."

In December, responses suggested happier people. Team members had been with the same teachers and students for four months. Many of the team members had expressed the need to work with children on a regular basis and were happy about this. "I got to make up my own recipe and it was delicious." "I've started pinning a dress." "It is the first month that I have liked my job." ;" "My garden is growing." "December has been both rewarding and exciting." "I've gone searching probably more vigorously for problems to solve." "I've gone to a few new fossil sites. I discovered a few new interesting finds. I've returned to fossil sites I had abandoned before as "high ground." I have discovered a few new interesting finds just below the surface and the other sites' landowners called me after finding my card." These comments represent evidence of

"norming and performing."A few stressed comments included: "It is an anomie for me, weeds are in the planter boxes." "We haven't had a December." "It's still high tide." indicating "storming" but most of the comments were positive. The month of December was mixed with "storming, norming and performing."

January was full of comments about being refreshed and renewed. There was a sense that people had developed positive relationships with teachers they were working with. "What an exciting month." and "I came back energized." "Refreshed, refueled!" "For the first time I felt like I was able to build a sandcastle." indicating "norming." Several members experienced family concerns, health problems or expressed, "Nothing happened to me." and "I'm on hold." Overall, January appeared to have positive comments. Our director asked us to set up appointments individually to let him know how we were feeling. While there appeared to be very little "storming," the group appeared to move from "norming" toward "performing" as they continued to develop rapport with teachers and organize inservice activities.

February was a different story. New assignments were given to secondary math and science teachers. One of the things I saw happen in February was that people voiced frustration, indicating "storming" again. I sensed a "down" among the spirits of people. "I feel like I'm ripping my pattern pieces apart." "I've accepted my role and have gone to the only beach I am allowed to go to." "My car is filled with things I can't deliver." The elementary team members and one other member were not as frustrated, "It's OK." "It's been good." "Things are good." "It's Oscar night." Teachers had been establishing rapport and direction with teachers in their chosen schools and were then reassigned to individual schools and two to four teachers. Team members were told to leave

everything else they had been doing. When the direction shifted, no new inservice opportunities for the team members were brought in and there was no communication about why the change took place. It appeared that with a shift of direction from the district level supervisors without any team member input came a relapse into Tuckman's "storming" stage.

On a good note for February, seven new members joined the group. They were all elementary people and were excited to be a part of the team. During this month, I also presented the entire data to the group. This proved to be a good springboard for a discussion of "I am not the only one who has experienced these things." I had team members plot their points on a grid of the group data and talk with one another about what makes them satisfied?" After February I had group members express their analogies based on their levels of satisfaction.

March indicated an increase in satisfaction of the group members. Very few negative comments and many average comments. "I want a book of instructions!" was the only low point. Many pleasant comments such as "I've been reading an anthology, some pleasant reading, some fiction that was calm and then there was the Stephen King novel." "I feel like a pile of artifacts have come in and I have to categorize them, but that's OK." "... pretty good, steady, no injuries (running), the weather is good." There were some very good comments too including: "I'm cooking, trying new recipes, getting comfortable with things," and "I feel like wonderful bunnies have come to us with flowers all around." It is clear in the data that the new members brought an uplifting of spirits among the elementary members and their enthusiasm and energy was

contagious. We appeared to have passed Tuckman's "storming" and were moving through "norming" very well.

- In April, several events brought the group together. Teams of teachers worked together to organize activities for several events including "The Invention Convention" and "Math Superstars." Another group of teachers organized activities for a MOSH (Museum of Science and History) booth during a family day and another group put together a highlight on USI for our local Higher Education Consortium (HEC) group. Tuckman's stage of "performing" was very evident in April. Team members were working together using their ideas.

We also had a week off for spring break in April. We were told that we would not be in the classrooms in May and so to wind down what we were doing in the classes. We were told that in the month of May, we would begin preparations for the summer and for next year. This was another change, but the attitude of the group was different than in February. In addition, the district adopted a reform program called "America's Choice" in which 9 members were chosen to go through the training to assist in preparing the district for using standards. The average of April was a little higher than March. Several frustrated comments include, "We keep rehashing the same thing." And "I'm sitting around throwing patterns in the air," were expressed. There were also good comments of: "I feel like I just started a catering business. Even though some recipes have messed us, I'm making money and my calendar is full." Also, "Feeling groovy," and "My garden is in bloom" and "My flowers are blooming" indicated positive experiences in April.

So, why did the average fall in May? Teachers were taken out of the classrooms and were involved in science and math content training. Earlier, teachers had increased their satisfaction when they had the opportunity to work with children. However, there seemed to be an undercurrent of helplessness among some members. "I'm sick of being treated like a junior member." And "I've resolved it in my head to just do what I am told." "I'm stressed and not looking forward to August." It was interesting to see that when members became very stressed, they were not as likely to use their stories to express their frustrations. Some members were shutting down. On the other hand, "It was exciting, but long and I got very tired from the performance (water ballet)." And, "Too much job at the end of my year, but I like it" were also expressed indicating the perceptions of unfinished business. Team members were not planning in May, like they had thought. They were involved in being trained (science content, math content and America's Choice took up much of the month.) It was as if the year was behind them, which would be Tuckman's "adjourning," mixed with some "storming."

The entire year moved in a wave-like fashion. By April, it appeared that the group was finally beginning to settle into a high-functioning team. By the end of May, team members were expressing the ending of the season and thoughts of next year. George's (1982) third stage of development was evident in April when groups were putting together programs. It will be interesting to see how this group develops through the next four years.

Table 2. Tuckman's Stages of Development.

	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Adjourning										X
Performing						X			X	
Norming			X	X	X	X		X		
Storming		X	X				X	X		X
Forming	X									

Stages of Development

I was able to determine the stages of development of our team members' descriptions. Using the team members' analogies, I identified each one as forming, storming, norming, performing and adjourning as described by Tuckman (1965). The team moved from "forming" in the first month to "storming" over the next six of seven months. By November, the group was moving into the "norming" and by April reached "performing." Even though the team moved through the stages, it was evident that some members moved more rapidly than others and in the end, there were members spanned across the various stages of development until April. In April, several different programs were going on and people were organizing and pitching in to create programs. Team members did not indicate that they were spinning their wheels like they had in

previous "storming" months. It was an exciting month for most of the team members. I was surprised that team members treated May as an "adjourning" month.

Conclusions

If we compare the levels of satisfaction of team members with the stages of development for the team, I believe that our group followed the following progression. In August, we were getting to know each other. It was not until December that people began to work together on projects on a regular basis. Math and science members began working together to present high risk middle school students with "Integrated Science" activities. By April, there were several projects in which team members were asked to assist in the implementation. People were "performing" based on their strengths and interests.

I believe the data have much to say about giving individuals ownership and responsibility. I believe the data can speak to administrators about how to effectively use those individuals who are talented and motivated to influence change. I also believe the data have something to say about leadership of our team.

It is evident that while a group may appear to pass through various stages of development, not all members are at the same level and some may be suffering without the group having knowledge of it. It appears that this group had a lot of freedom to make decisions and implement ideas in the beginning of the program, and experienced a temporary set back by a change in February when they were given directives from downtown personnel. Yet when a similar change occurred in April, members were not as concerned about the change.

I believe members' satisfaction in April was not affected by district level changes because members were already involved in projects they had created and were implementing. Several needs were evident throughout the project: 1) we all need to be supported and encouraged; 2) we all need to believe that what we think and do has value;3) we all need to find our places in what we do, and, 4) we all need to be a part of the decision making and implementation.

The director in this project is a district level administrator whose office remained downtown in the first year. A math and a science leader, members of the team, were designated prior to the start of the grant. During the course of the year, the leaders as well as the district's math and science supervisors met every week. There was no formal way of sharing the information discussed in those meetings. Only one of those five members spent any time in the schools.

We had team meetings every other Friday. Initially, we were told that those meetings would be debriefing sessions. The team meetings were most often information sharing as opposed to idea sharing sessions. The final stage of George's (1982) team stages is government. In that stage, there is a lot of feedback and decision making on the part of the members of the team. According to George, team members cannot reach the last stage of development without members being given the opportunity and responsibility to organize and plan for the team. He goes on to say that power sharing and group problem solving is what leads teams to higher stages of development. So, while the team leaders were meeting at the district office, little opportunities for input were being used at the team member level.

Recommendations

This year I, along with 25 others, participated as members of a National Science Foundation initiative in Jacksonville, Florida. Our goal is to increase the scores of minority students in the areas of mathematics and science over five years. In the course of this first year, I interviewed each person monthly to identify his or her level of satisfaction. I believe these interviews provide insight for leaders who are interested in getting the most out of their employees. From these data, six things were evident about teachers as leaders.

The first thing is that teachers as leaders are most satisfied when they have the freedom to mold an idea. The idea can come from a supervisor, a colleague, a teacher, an administrator or the teacher herself, but the key to satisfaction is having the freedom to develop the idea and create whatever is needed to implement the idea. The data in April is a perfect example of teachers planning, organizing and implementing programs and their satisfaction levels were high. When these teachers were not given any opportunities to be creative, their satisfaction levels dropped significantly. When they were given opportunities to create, they were able to put together programs that were very thorough and innovative.

Second, teachers as leaders appear to work best when they work as part of a two to three person team. I have seen many different arrangements of people working together on various projects in the course of this year. I worked on many group projects with different people. In every situation, we were able to work with one another because we understand our own strengths and weaknesses and our differences are seen as a catalyst instead of a deterrent to productivity. When the groups were more than three or

four, less was accomplished. I believe teachers as leaders can work with a wide variety of people, and work best when they have other people to bounce ideas off. Supervisors need to be sure that teachers as leaders have many opportunities to work with different small groups of people. Teachers as leaders can form these groups without the assistance of the supervisor or groups can complete a task the supervisor needs completed. When the supervisor dictates exactly what is to be done, teachers as leaders can do this, but are much more "satisfied" when they have the opportunity to put programs together.

Third, while teachers as leaders appear to be creative and productive when they are working on projects, they also are willing to assist other people's projects. On five separate occasions, when one teacher was in charge of an activity or a program and needed the assistance of the members of the group, these teachers as leaders were able to shift gears, pitch in, get the job done and go back to their own projects. The attitude of, "what do you need us to do" was very prevalent in all five instances during the first year. One event took place in the fall and the other four events took place in the spring. In all five instances, a different member was in charge. In all five instances, the supervisor initiated the idea and allowed the group to work out the details. In all five events, team members enjoyed the experience.

Fourth, teachers as leaders are very willing to participate in programs or initiatives that support children and they do not lose sight of this and need to be sure they do not "burn out." Teachers as leaders believe in programs, ideas and events that support children. They are willing to work after school and on weekends for the good of the cause. There is ownership to the cause and they are tireless in their pursuit of

supporting children. Supervisors need to be sure that their teachers as leaders take time for themselves for renewal purposes. Our supervisor assured us that we would have July off. When other needs came up, he assured us that July was ours, that we needed renewal.

Fifth, teachers as leaders have many different strengths. On our team, some teachers have the gift of organization. I have watched them put together programs, conferences, workshops and presentations. Individuals who organize programs have no trouble getting the assistance they need from the other members of the team. Other teachers have the gift of presentation. During programs, presentations or workshops, they have been delivering ideas and inspiration through their spirit and energy. Still others have the gift of support and encouragement. They put together the necessary equipment or program brochures or work packets so that events run smoothly. While teachers as leaders have strengths or preferences, the beauty of working with teachers as leaders is that they are able to take on any one of these roles and do a good job. Supervisors need to capitalize on allowing teachers as leaders to choose their own interests. The needs of any program need to be identified and then the teachers as leaders need the opportunity to assist in the organization and construction of the project. Supervisors need to realize that teachers as leaders can make a supervisor's life easier. All supervisors need to do is give them parameters, time and then turn them lose, a risk many supervisors are unwilling to take.

One final note has to do with evaluation. Teachers as leaders need the support of their supervisors. Supervisors need to be available to meet with teachers as leaders either formally or informally, often. For a year I interviewed teachers every month.

Each interview took less than five minutes. At any given month I could tell you how satisfied any one of those teachers was. Supervisors need to have this type of dialogue. Teachers as leaders need supervisors who know their strengths and their ideas. Teachers as leaders need the freedom and trust of those who lead them. Supervisors need to take the risk to allow them that freedom. The best way to get the most out of teachers as leaders is to give them opportunities and then give them feedback of what worked and what could be done better.

During this year, I have seen teachers given the freedom to develop and create ideas. I have seen them work as part of two to three person teams as well as assist other members with their projects. I have seen them committed to creating opportunities for helping children and I have seen them direct, perform and support one another in mathematics and science. In every situation, when teachers as leaaders have the opportunity to work toward supporting children, there has been high levels of satisfaction. Hiring the best teachers to be leaders is not enough. Giving them opportunities and encouragement will influence systemic change. I believe systemic change in education will take place only when many facets of an educational system work together to support children. This research supports using teachers as leaders as one of those facets.

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